Smoking cessation strategies for real-life situations?

Macé M. Schuurmans, Chris T. Bolliger

University of Stellenbosch, Cape Town, South Africa

Classic smoking cessation trials using nicotine replacement therapy (NRT) and/or bupropion achieve one-year sustained smoking cessation rates of 20–30%. These results are usually obtained in clinical trials which include counselling and follow-up visits with verification of smoking status by objective measurements (exhaled carbon monoxide or urinary cotinine levels). The use of pharmaceutical aids outside a study context of this kind, and in particular without counselling, has recently been investigated by Pierce and Gilpin in a population-based study using California Tobacco Surveys of 1992, 1996 and 1999 [1]. In their highly debated study on the impact of over-the-counter sales on the effectiveness of pharmaceutical aids for smoking cessation, they found that NRT increased only short-term cessation in moderate to heavy smokers. An advantage with respect to long-term cessation was found only for the time period before NRT became widely available over the counter (August 1996). In 1999 no advantage was observed for pharmaceutical aid users in either the short or long term among the nearly 60% of smokers classified as light smokers (<15 cigarettes/d). The authors concluded that since becoming available over the counter NRT no longer appeared effective in increasing successful long-term cessation in California smokers. This study adds to concerns that the efficacy of pharmaceutical aids observed in clinical trials may not extend to effectiveness in the general population, and that the lack of adjuvant behavioural counselling may be responsible for the poor results.

Counselling is central to the smoking cessation process; hence some programmes have focused on this aspect and a number of successful counselling strategies have resulted.

In the current issue of *Swiss Medical Weekly*, Frikart et al. [2] report on the success rate and predictors of success in their five-day plan to stop smoking (FDP), a modified version of a counselling programme which originated in the United States some 40 years ago. The FDP study was performed in the French-speaking part of Switzerland and included 123 participants in the period 1995–1998. The smoking cessation rate was 25% after one year, based on self-declared smoking status from personal or telephone interviews. Duration of smoking habit was the only variable, showing a significant association with successful smoking cessation at one year (35% and 19%, for <20 and ≥20 years' smoking history, respectively).

The FDP programme was originally developed by McFarland and Folkenburg in the 1960s and was sponsored by a Seventh Day Adventist organisation. It emphasises that smoking is an intense neurophysical habit and focuses attention on information on the effects of smoking and withdrawal management, by providing daily instructions including diet recommendations. One of the key features of the original programme is that at the first meeting an effort is made to pair off all participants with partners who are also participants. Pharmaceutical help is not usually provided [3].

There have been a number of attempts to study the success rate of this programme, one of the first being a study published in 1966 by Thompson and Wilson [3] reporting point prevalence rates of 16% smoking cessation at 10 months. In this study of 298 subjects the smoking status was verified by questioning the stop-smoking partner. This "cross-check" served as a kind of internal control.

Since this early report a number of studies have investigated the FDP's success rates and predictors of success (none using a biochemical method to verify the participants' smoking status). The current study by Frikart et al. also relies on the self-declared smoking status. The high success rate at one year is an encouraging result. The lack of verification of smoking status (either by "cross-check" or biochemical methods), the relatively small number of participants and the participation fee are drawbacks of the design. Regarding verification of smoking status, it may be argued that a low-intensity intervention may justify minimum criteria for determining smoking status. Others may argue that verification of smoking status may influence the therapeutic relationship or trust. The requirement that all subjects pay a 100-euro participation fee is likely to have introduced a selection bias. Even in an affluent country, such as Switzerland, such a nominal fee is likely to select subjects with greater motivation to stop smoking. Smokers who "cannot afford to stop smoking" tend to be less

successful candidates for smoking cessation programmes. However, in view of the prevalence of smokers in Switzerland (35%) any systematic evaluation of a real-life programme is laudable, especially if the essential component of the intervention is counselling.

Another more recent approach to smoking cessation pursued by Swiss researchers (Etter and Perneger) is a programme using computer-tailored counselling letters and "stage-matched" booklets based on the answers to a questionnaire. The information material is sent to participants by mail. Counselling strategy is determined with the aid of a computer programme and depends on the participants' stage of change, classified as precontemplation (no intention of quitting smoking in the next 6 months), contemplation (seriously considers quitting in the next 6 months), or preparation (has decided to quit in the next 30 days), level of tobacco dependence, self-efficacy, and personal characteristics. A recent randomised trial involving volunteers (n = 2934) from French-speaking Switzerland showed that with this strategy self-reported abstinence at 7 months was 2.6 times higher than in the control group without any intervention [4]. The programme was effective in "precontemplators" who were not motivated to quit smoking at baseline, and was effective regardless of perceived difficulty in quitting smoking at baseline.

Finally, the use of telephone helplines must be mentioned here. Their number has increased in recent years with more widespread use of this medium to help people stop smoking. An approach of this kind has the potential to reach a large number of smokers and provide counselling by trained personnel. The evidence of real-world effectiveness of a telephone quitline for smokers was recently investigated in California by Zhu et al. [5]. Using an established protocol involving a proactive counselling approach (counsellor calls subject) and provision of self-help materials, it was shown that subjects randomised to the counselling group had a higher success rate than those randomised to "no intervention", which included some subjects who did receive counselling because they chose the option of calling the quitline a second time (intention-to-treat analysis). Per protocol analysis showed that abstinence rates had approximately doubled at the follow-up time-points 1, 3, 6 and 12 months.

As shown above, a number of recent studies have investigated the real-life effectiveness of certain smoking cessation strategies. Pharmaceutical help without systematic behavioural counselling appears not to lead to substantial success rates. Counselling is central to the process of becoming a non-smoker. Various counselling approaches are available which can reach a large number of smokers, but more research is needed to make it easier to identify which smoker is best suited to which type of counselling approach.

Correspondence:
Dr M. M. Schuurmans
Clinical Building, Internal Medicine
University of Stellenbosch, PO Box 19063
19063 Tygerberg 7505, Cape Town
South Africa

References

1 Pierce JP, Gilpin EA. Impact of over-the-counter sales on effectiveness of pharmaceutical aids for smoking cessation. JAMA 2002;288:1260–4.
2 Frikart M, Serge E, Cornuz J, Zellweger JP. Five-day plan for smoking cessation using group behaviour therapy. Swiss Med Weekly 2003;123:39–43.
3 Thompson DS, Wilson TR. Discontinuance of cigarette smoking: "Natural" and with "therapy". A ten-week and ten-month follow-up study of 298 adult participants in a five-day plan to stop smoking. JAMA 1966;196:96–100.
4 Etter JF, Perneger TV. Effectiveness of a computer-tailored smoking cessation program. A randomized trial. Arch Intern Med 2001;161:2596–601.
5 Zhu SH, Anderson CM, Tedeschi GJ, Rosbrook B, Johnson CE, Byrd M, Gutierrez-Terrell E. Evidence of real-world effectiveness of a telephone quitline for smokers. N Engl J Med 2002; 347:1087–93.

Swiss
Medical Weekly

Official journal of
the Swiss Society of Infectious disease
the Swiss Society of Internal Medicine
the Swiss Respiratory Society

The many reasons why you should choose SMW to publish your research

What Swiss Medical Weekly has to offer:

- SMW's impact factor has been steadily rising, to the current 1.537
- Open access to the publication via the Internet, therefore wide audience and impact
- Rapid listing in Medline
- LinkOut-button from PubMed with link to the full text website http://www.smw.ch (direct link from each SMW record in PubMed)

- No-nonsense submission – you submit a single copy of your manuscript by e-mail attachment
- Peer review based on a broad spectrum of international academic referees
- Assistance of our professional statistician for every article with statistical analyses

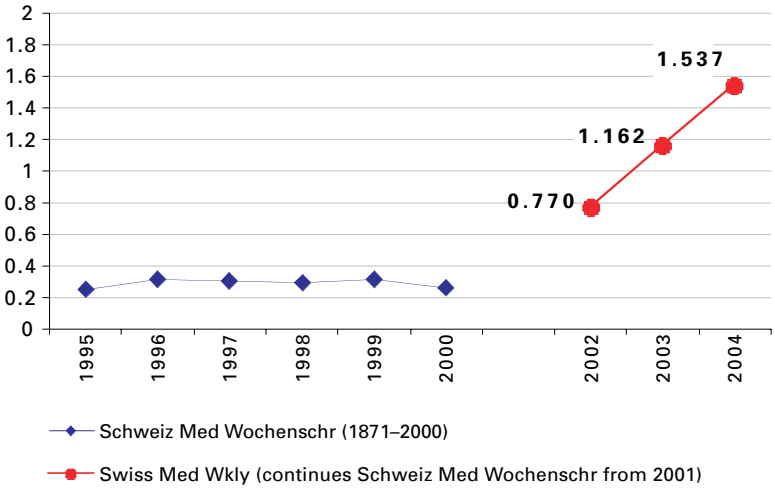
- Fast peer review, by e-mail exchange with the referees
- Prompt decisions based on weekly conferences of the Editorial Board
- Prompt notification on the status of your manuscript by e-mail
- Professional English copy editing
- No page charges and attractive colour offprints at no extra cost

We evaluate manuscripts of broad clinical interest from all specialities, including experimental medicine and clinical investigation.

We look forward to receiving your paper!

Guidelines for authors:
http://www.smw.ch/set_authors.html

Impact factor Swiss Medical Weekly



EMH FMH Schwabe
Editores Medicorum Helveticorum

All manuscripts should be sent in electronic form, to:

EMH Swiss Medical Publishers Ltd.
SMW Editorial Secretariat
Farnsburgerstrasse 8
CH-4132 Muttenz

Manuscripts: submission@smw.ch
Letters to the editor: letters@smw.ch
Editorial Board: red@smw.ch
Internet: http://www.smw.ch